

WHAT IS CLAIMED IS:

1. A cell library database composed of basic circuits of multiple types implementing various logics, the database containing:

voltage value information which is given to at least one of a plurality of data
5 terminals composed of input and output terminals included in the basic circuit and in which different voltage states of one node are represented in multiple bits; and

logical information between the input and output terminals including one or more said data terminals having the voltage value information.

2. The database of claim 1, wherein the data terminal having the voltage value
10 information represented in multiple bits is a power source terminal.

3. The database of claim 1, wherein the data terminal having the voltage value information represented in multiple bits is a digital input terminal or a digital output terminal.

4. The database of claim 1, wherein the data terminal having the voltage value
15 information represented in multiple bits is an analog input terminal or an analog output terminal.

5. The database of claim 1, wherein the database further contains information on logic delays between the input and output terminals when logic changes occur therebetween.

20 6. The database of claim 1, wherein the database further contains withstand voltage information for each of the basic circuits.

7. A timing verification system for an integrated circuit composed of basic circuits of multiple types implementing various logics, the system comprising a cell library database which contains, for each of the basic circuits,

25 voltage value information of a power source represented in multiple bits and given to at least one of a plurality of data terminals composed of input and output terminals included in the basic circuit,

logical information between the input and output terminals including one or more said data terminals having the voltage value information of the power source, and

information on logic delays between the input and output terminals when changes in the logical information occur therebetween,

5 wherein the system conducts timing verification by calculating a logic delay based on the information on logic delays according to the voltage value information from the data terminal which has the voltage value information of the power source and is provided in each of the basic circuits constituting the cell library database.

8. A withstand voltage verification system for an integrated circuit composed of
10 basic circuits of multiple types implementing various logics, the system comprising a cell library database which contains, for each of the basic circuits,

voltage value information in which different voltage states of one node are represented in multiple bits and which is given to at least one of a plurality of data terminals composed of input and output terminals included in the basic circuit, and

15 withstand voltage information of the basic circuit,

wherein the system conducts withstand voltage verification by comparing the voltage value information from the data terminal having the voltage value information with the withstand voltage information.

9. The system of claim 8, wherein the data terminal having the voltage value
20 information represented in multiple bits is a power source terminal.